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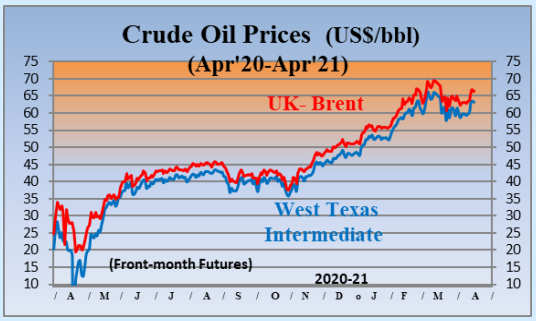
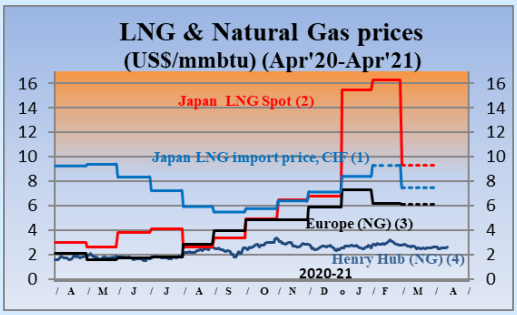
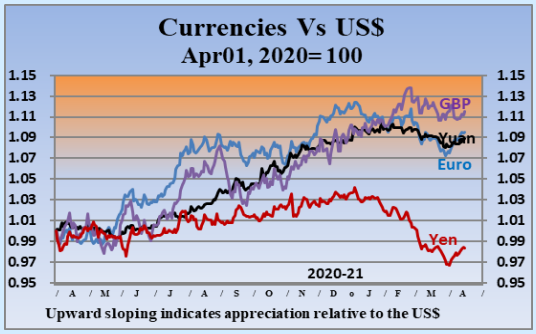


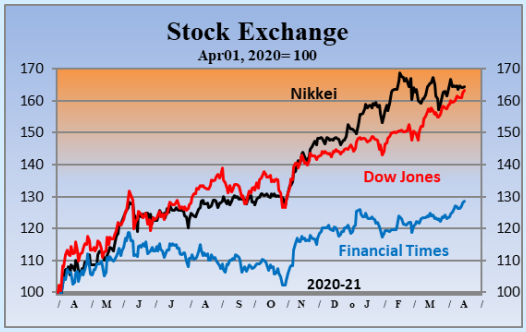
Sources:
(1) DOE-EIA
(2) Investing.com



Sources:
(1) Ministry of Finance "Japan Trade Statistics"
(2) Ministry of Economy, Trade and Industry (arrival month basis)
(3) Estimated by World Bank (Netherland Title Transfer Facility)
(4) DOE-EIA, NYMEX (Front-month Futures)



Source: x-rates.com



Sources:
(1) Finance. Yahoo.com
(2) Investing.com

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1. Energy Policies

Seiya ENDO, Economist
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Discussions on formulating the Sixth Strategic Energy Plan are underway. The target energy supply-demand structure for 2030 has been reviewed since February, in light of the discussions on the 2050 carbon neutrality target conducted to date.

The discussions at the 38th Strategic Policy Committee meeting on March 11 focused on supply security and resilience. At the opening, the moderator made a notable remark, with reference to the Great East Japan Earthquake ten years ago, that safety is the overriding priority in energy policy and that energy security is particularly important among the three Es of the 3E policy. The Committee members engaged in lively debate, particularly about the position of fossil fuels among various energy sources, in view of the trends in recent years. Members commented that the resource strategy will newly include securing supply destinations for alternative fuels such as hydrogen and ammonia as well as favorable sites for CCS. There was also a comment that securing interests involves a risk of holding stranded assets in the long run if Europe and the U.S. shift further away from fossil fuels.

At the 39th Committee meeting, opinions were heard from six industry associations representing energy suppliers, including the Federation of Electric Power Companies and the Japan Gas Association, and from the Ministry of Foreign Affairs and the Ministry of the Environment. Presentations by fossil fuel businesses such as the Japan Gas Association and the Petroleum Association of Japan indicated that they have been earnestly exploring new forms of business after the carbon neutrality declaration last year. The Japan Gas Association stated that it took 30 years to expand the use of LNG in the city gas business, and shared the view that the introduction of carbon-neutral gases should require a similar lead-time. Since this applies not only to gas but also to other energy sources, this comment confirmed the need to take measures toward carbon neutrality into consideration when formulating the 2030 target.

The moderator shared plans to deepen discussions on the 2030 energy vision in the Committee in view of the 2050 carbon neutrality target. With the EU having raised its 2030 NDC from 40% to 55% last December and the US set to announce its NDC at the Climate Summit in April, reconsideration of Japan's CO_2 emission target will certainly be a major issue. Meanwhile, with less than 10 years left until the target year, the discussions will also need to be practical, focusing on measures that are feasible in that time frame and the scale of their implementation.

IEEJ Chairman and CEO Masakazu Toyoda commented as follows:

- 38th meeting: We should remind ourselves that there is no perfect energy source and build a well-balanced portfolio. It is possible to continue to use fossil fuels in the medium to long term through combination with decarbonization technologies. I ask that efforts be made to form an international consensus that "CO_2 emissions are to blame, but not fossil fuels." I also ask that electricity system reforms, including leveraging the capacity market and introducing Contracts for Difference (CFD), be considered in order to prevent excessive liberalization of the electricity system.
- 39th meeting: Costs should be thoroughly considered for both 2030 and 2050, to determine whether the public and industry will bear the high costs. A system for curbing rises in the cost of industrial electricity should also be discussed.

2. Developments in Nuclear Energy

Kenji KIMURA, PhD
Senior Researcher, Nuclear Energy Group
Strategy Research Unit

To mark the tenth anniversary of the Great East Japan Earthquake and the Fukushima Daiichi accident that occurred on March 11, 2011, the Nuclear Energy Agency of the Organisation for Economic Cooperation and Development (OECD/NEA) released a report on March 3, 2021, presenting the details of the accident and the actions taken by Japan and by other member countries following the accident. Regarding Japan, the report commends the Nuclear Regulation Authority (NRA), which was established after the accident, for quickly drawing up new safety regulation standards and for its recent effort to adopt a new risk-informed surveillance process. Meanwhile, the organization advises the NRA to maintain independence and have more occasions for open discussions with regulated parties.

On March 16, the NRA announced that intruder detection equipment for protecting nuclear materials had been failing to function for an extended period at TEPCO's Kashiwazaki-Kariwa Nuclear Power Plant. This lapse in plant security was rated by the NRA as "red (a level representing major impact on safety functions or performance)." TEPCO has not objected to this rating and has said they will consider countermeasures and investigate the causes immediately. While the actual gravity of the security lapse cannot be deduced due to a lack of details pertaining to plant security, it can be assumed that the problem was extremely serious given the "red" rating. Other incidents have been discovered at the same plant, including falsely claiming completion of construction of safety measures that were actually unfinished and an employee using a colleague's ID pass to enter the main control room. TEPCO must take this incident very seriously, reflect on what happened, and ensure thorough remediation.

On February 23, French regulator ASN (English name: Nuclear Safety Authority) set out rules for extending the operational life of 900 MW reactors operating for at least 40 years. France has had no limitations on the operational life of reactors, and reactors were required to pass designated safety tests every ten years to be allowed to operate for the next ten. The decision this time set clear conditions for long-term operation beyond 40 years. Even though France has a goal of reducing the share of nuclear power in the total power output to 50% by 2035, it still considers nuclear energy as an essential power source. The decision indicates France's intention to fully utilize its existing power plants.

On March 10, Russian state nuclear firm Rosatom announced it has started the construction of Akkuyu Unit 3 in Turkey. This news is a clear indication that Russian companies are continuing to rapidly expand their overseas business, as well as Turkey's intention to actively expand the use of nuclear power, as also shown by Akkuyu Units 1 and 2 which are under construction. Nuclear plant manufacturers of nations including Japan, the US, and France need to once again consider how to plan feasible export projects.

3. Recent Developments in the Oil and LNG Markets

Hiroshi Hashimoto
Senior Analyst, Head of Gas Group
Fossil Energies & International Cooperation Unit

Due to larger gas demand caused by cold weather, the big four markets in Northeast Asia - Japan, Korea, China and Chinese Taipei - imported 42.55 million tonnes of LNG during the first two months of 2021, 15% more than one year earlier, serving as one of the causes of extremely high spot LNG prices in early January. China imported 27% more LNG in the two months than a year ago.

In February, Qatar's QP announced the largest investment decision in the history on an LNG production project with capacity of 33 million tonnes per year. As indicated in its announcement of New Sustainability Strategy in January, QP expressed its intention to reduce GHG footprint of the project through a large-scale carbon capture and sequestration (CCS) facility, solar power supply, and a jetty boil-off-gas recovery system.

There have been notable announcements in the LNG industry regarding decarbonization and Net-Zero initiatives. In early February, JERA and Malaysia's Petronas announced a Memorandum of Understanding (MOU) on cooperation in the decarbonization sector. In late February, Cheniere Energy, a major LNG exporter in the United States, announced its plan to provide its customers with GHG emissions data of LNG from the company's facilities beginning in 2022. Singapore's Pavilion Energy announced an LNG purchase agreement with Chevron accompanied by a statement of GHG emissions by cargo. Mitsui & Co. and Hokkaido Gas announced a sales and purchase agreement of carbon-neutral LNG. In March, Tokyo Gas announced its Carbon Neutral LNG Buyers Alliance with 14 end-user companies, aiming at further penetration of carbon neutral LNG. Shell announced that it had received in the United Kingdom the first carbon neutral LNG cargo in Europe bought from Russia's Gazprom.

The OPEC+ meeting on 4 March agreed to maintain the current production level in April. Saudi Arabia is assumed to maintain its voluntary production cut of 1 million barrels per day. The decision served as a surprise for many observers who had anticipated smaller production cuts. On 7 March, the Brent price shot up over USD 70 / barrel for the first time since January 2020, after a drone attack on Saudi oil facilities. However, as evidenced by a 7% one-day drop to USD 63 on 18 March due to concern over supply surplus, fundamentals do not seem to support prices.

Discussions are underway over renewal of the nation's Strategic Energy Plan. On 2 March, the Natural Resources and Fuel Committee - under the Advisory Committee for Natural Resources and Energy - discussed issues and directions of resource and fuel policy. As a committee member, Mr. Toyoda, CEO of IEEJ, expressed views that fossil energy should maintain its importance even after decarbonization or transition, companies should be given incentives to advance decarbonization, and integrated initiatives should be established to promote blue hydrogen and blue ammonia in the Indo-Pacific region.

4. Update on Policies Related to Climate Change

Takahiko TAGAMI, Senior Coordinator, Manager
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Climate Change and Energy Efficiency Unit

On January 27, US President Biden issued an executive order to pause new oil and gas leases on public lands or in offshore waters pending completion of a comprehensive review and reconsideration of Federal oil and gas permitting and leasing practices. On March 9, the Department of the Interior announced that an interim report on the comprehensive review and reconsideration will be made in the coming summer, and on March 26, launched a forum on the leasing program with the participation of representatives of industry, labor unions, environmental groups, indigenous people, and others, giving rise to the possibility that the suspension may become prolonged. Meanwhile, some analysts have pointed out that such approaches to limit fossil fuel supply and production merely cause production to be relocated from federal lands to private lands and overseas, and have almost no effect on the climate.

On March 11, the Fourteenth 5-year Plan was approved by the National People's Congress in China. While goals such as a 19–20% reduction of CO_2 emissions per unit GDP between 2020 and 2025 and limiting total energy-related CO_2 emissions to 10.5 billion tonnes were expected to be adopted, the reduction target for CO_2 emissions per unit GDP was set to 18%. Furthermore, not only the goal for total energy-related CO_2 emissions, but also the goal for total energy consumption, which was adopted in the Thirteenth Plan, was omitted from the Fourteenth (for details on the 5-year Plan, also see China Watching on page 11 of this Newsletter).

On February 1, the subcommittee on carbon pricing ("the subcommittee") of the Central Environmental Council was convened after a one and a half year hiatus and on February 17, the METI study group on economic instruments was convened ("the study group"), commencing discussions on carbon pricing that will contribute to the growth strategy. Discussions at the subcommittee have begun, starting with a carbon tax and credit trading, with the aim of devising a specific carbon pricing scheme that will contribute to achieving carbon neutrality by 2050 and the growth strategy, while taking note of international trends. Meanwhile, the study group discussed system designs that would contribute to growth within the context of the policy mix, specifically, themes such as carbon border adjustment measures, fossil fuel taxes, and credit trading. Both the subcommittee and the study group are set to issue an interim report by around the summer.

On March 23, the Energy Efficiency and Conservation Subcommittee of the Advisory Committee for Natural Resources and Energy convened a meeting following the one in February. For achieving the 2050 carbon neutrality target, the first hearing was conducted for energy-intensive industries and the energy conversion sector on the subject of further energy conservation and expansion of the use of non-fossil energy. The Subcommittee also discussed how to revise the approach for energy conservation for the 2030 energy mix. At the next meeting scheduled for April, the Subcommittee will conduct a hearing for the transport and residential/commercial sectors and new energy conservation measures for 2030 and rough estimates of energy savings to be made by those measures will be presented.

5. Update on Renewable Energies

Akiko SASAKAWA, PhD
New and Renewable Energy Group
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On March 8, the establishment of the Battery Association for Supply Chain (BASC) comprising 28 Japanese companies was announced. This is an alliance of automobile, battery, parts, raw materials manufacturers and trading houses transcending sector boundaries to strengthen the international competitiveness of Japan's battery supply chain. As the utilization of renewable energy and electric vehicles (EV) grows to achieve a decarbonized society, it is considered essential to expand the use of batteries. The Association will commence efforts as a team to boost the international competitiveness of Japan's supply chain sector comprising industries related to battery materials, parts and their raw materials.

The strengthening of battery supply chains is accelerating in Europe and the United States which had a head start. In Europe, the European Battery Alliance was formed in October 2017 to boost the competitiveness of the EU industry in areas including EV batteries. In December 2020, a bill for revising the EU Battery Directive, which regulates the entire lifecycle of batteries from design to production, reuse and recycling, was put forward to shift toward a recycling-oriented economy. In the United States, President Biden issued an executive order in this February requesting a review of supply chains in four key product areas including EV batteries, with the purpose of reducing dependency on certain countries and establishing a stable supply network.

Behind these moves lies China's enormous growth in the battery industry. China has designated innovation in battery technology as one of its key national projects and is actively expanding investment in the project, including in securing battery resources. For China, where the installed capacity of wind and solar power is expected to reach 1,200 GW by 2030, there is an urgent need to utilize variable renewable energies by leveraging energy storage technologies. China has also announced a policy to ensure that all new cars sold are EVs and other eco-friendly cars by 2035. Contemporary Amperex Technology (CATL), a vehicle-mount battery company established in 2011, has burgeoned into one of the world's top battery makers. China's presence is growing in the formulation of international standards as well. It was China that encouraged the International Organization for Standardization (ISO) to consider setting up a new technical committee (TC) to establish an ISO standard for lithium, the key material for lithium-ion batteries. As the committee's secretariat, China currently leads the establishment of this standard.

In view of these moves in Europe, the United States, and China, the Battery Association for Supply Chain of Japan will focus on the following key activities: deliberating international standards concerning the battery supply chain, formulating new standards, and establishing the battery ecosystem. The objective is two-pronged: to counterbalance China, which is leading the creation of the ISO standard for lithium, and to formulate a standard taking battery recycling into account.

Japan commercialized lithium-ion batteries ahead of other countries and has been leading in the number of patents on battery technology. Attention must be paid to how Japanese companies' efforts to strengthen Japan's international competitiveness in the battery supply chain sector will help accelerate the development of renewables into a major power source and realize a decarbonized society.

Past IEEJ Events

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